

Rodney District Council
Land Information Register Report

Page 1 of 1

24/10/2003

Council Ref No: 30691

Property(s):

362 MATAKANA VALLEY RD MATAKANA

Details:

LI Report on TIMBER TREATMENT PLANT

Ref: 1-30-0139 Date: 24/7/03

Author(s):

AUCKLAND REGIONAL COUNCIL

This report also relates to the Council Report no: LIR 950030

This report has been analysed by an Engineer or a Technical Officer, and the analysis for the land parcel(s) is as follows:

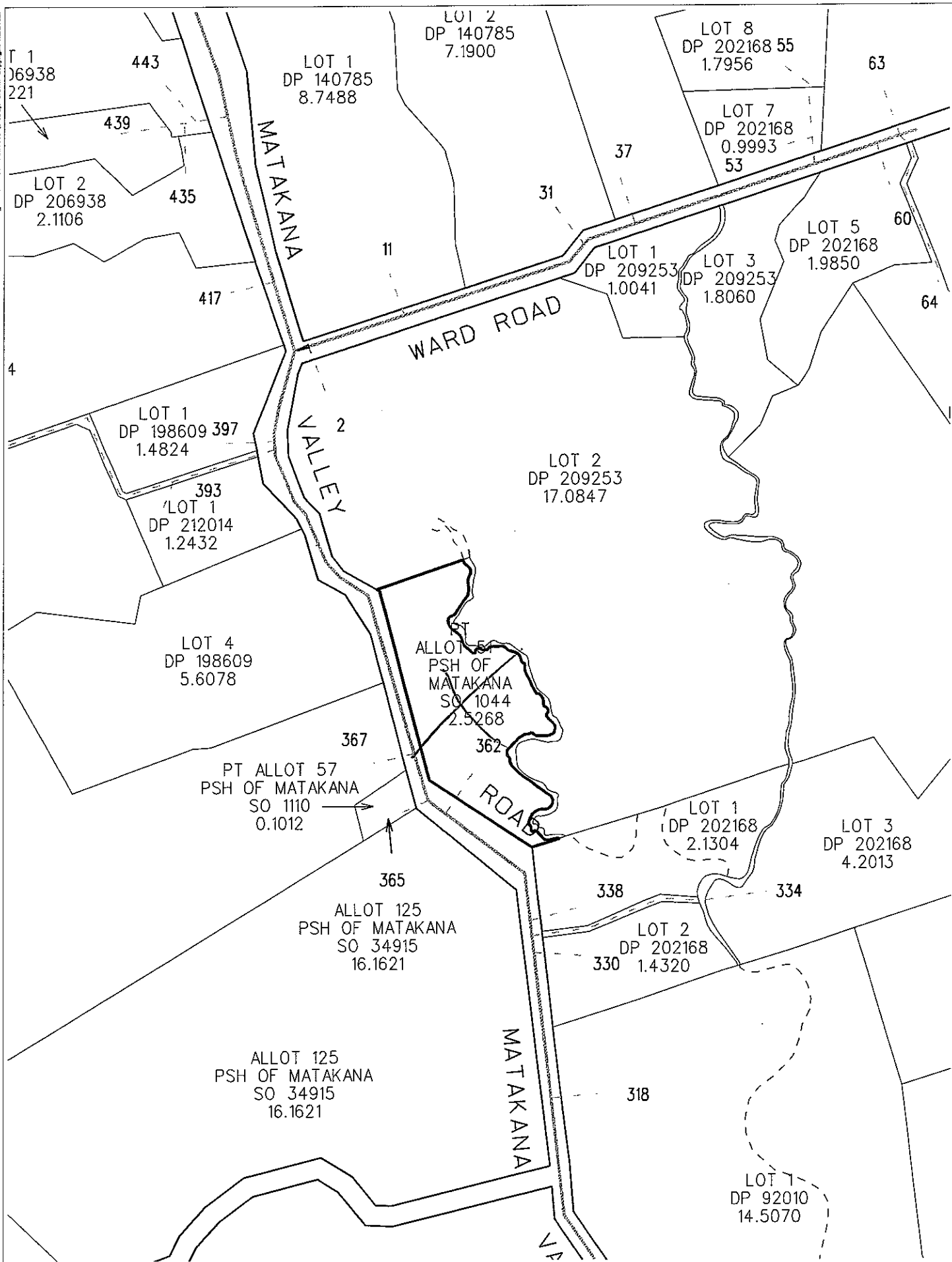
ALLOT 51 SO 1044

Analysis: Potentially Contaminated

Comments: ARC follow-up on potential CCA contamination

Last LIR analysis update by TERESA COX

Last data input on 24/10/03



--- DISTRICT BOUNDARY --- WARD BOUNDARY --- INDICATIVE STREAM --- FORMED ROAD CENTRELINE --- DRIVEWAY ENTRANCE

Parcel Boundaries Shown Are Indicative Only And Can Vary From Legal Boundaries.
COUNCIL ACCEPTS NO LIABILITY FOR ANY ERRORS OR OMISSIONS.
Spatial Accuracy Is Not Guaranteed.
This Plan Should Be Rectified In Colour Only
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CADASTRAL PLAN Showing Parcel Boundaries

Councils Cadastral Currency: September 2003

Printed: 20 Oct 2003 2:17PM Highlighted Parcel: PT ALLOT 51 PSH OF MATAKANA (SO 1044)

Rodney
DISTRICT COUNCIL

N Scale 1:5000 @A4

0 Metres 50 100 150 200

24 July 2003

**COPY FOR YOUR
INFORMATION**

Mr Gary Ryan
Managing Director
Kowhai Timber (1990) Limited
P.O. Box 170
Matakana

Dear Gary,

**Regional Council Investigations into Contamination at Timber Treatment
Facilities – Matakana Valley Road Site**

The Auckland Regional Council's (ARCs) Pollution Control Team is currently re-evaluating the results of a series of visits to timber treatment industry sites within the Auckland Region in the light of the Proposed Auckland Regional Plan: Air, Land and Water (PARP:AL&W) notified in October 2001. In the section of the Plan relating to 'Industrial and Trade Processes', all timber treatment sites, both operating and closed sites, are classed as high risk sites because they have a high potential to cause land and water pollution.

Under the Plan, timber treatment sites could be required to have resource consents for the following:

- Stormwater discharge consent (rules 5.5.1 to 5.5.15);
- Discharge of contaminants to land (rules 5.5.16 to 5.5.21);
- Contaminated site consent (rules 5.5.41 to 5.5.46); and
- Air discharge consent (rule 4.5.51).

Consents for some of these activities may already have been obtained.

The specific attributes of these 'industrial and trade process' sites that have resulted in them being classed as "high risk" in the PARP:AL&W are that timber treatment industry sites:

- Have been shown by ARC staff studies to display a high proportion of environmental non-compliance;
- Store large volumes of hazardous chemicals and they are operated with varying degrees of efficiency and diligence. As a result they are listed in the Australian and New Zealand Environment and Conservation Council's (ANZECCs) Guideline for the Assessment and Management of Contaminated Sites as being a priority land use; and
- Have the potential to give rise to major chemical spills. Past spills have resulted in the utilisation of considerable resources in respect of containment of spills, remediation of contaminated waterways and land and in rectifying the cause of the spill; both on behalf of the responsible company and ARC staff.

These attributes have been confirmed for Auckland sites by a series of investigations undertaken by the ARC over the past twelve years as summarised in Appendix A.



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File Ref 1-30-0139

2001, 2002 COMMENDATION
AWARD WINNER



"The Catalyst for Performance and Results"

During the visits to your specific site, a number of actual or potential contamination issues were identified. A listing of these issues, as contained in the ARC files, is included in Appendix B, Site Summary. These will require addressing as part of the consent requirements. Also, a number of soil/sediment samples have been taken at your site and/or in the drainage system. The analytical results of these samples (also included in Appendix B) demonstrate that parts of your site are contaminated above recognised environmental protection guidelines: refer to Appendix C, Soil and Water Acceptance Criteria.

Action required by Kowhai Timber is as follows:

- **Contact the ARC to confirm receipt of this letter and to discuss the issues outlined;**
- **Address the actual and potential contamination issues outlined in Appendix B;**
- **Undertake a site investigation;**
- **Apply for a resource consent to discharge contaminants to land;**
- **Apply for a resource consent to discharge contaminants onto or into land from an industrial or trade process; and**
- **Apply for a consent to divert and discharge stormwater.**

The latter two consents can be covered by a single assessment of environmental effects and will be processed together.

In the event that your company does not have personnel with the necessary expertise to carry out the technical investigations required, it is recommended that you engage the services of a suitably qualified consultant to assist your company. Appendix D contains an alphabetic listing of consultants the ARC is aware of who consider that they have the expertise to carry out site investigations. This list is not exhaustive and is intended to assist by providing contact details only. It should not be taken as an endorsement of the company listed by the ARC.

The time frames within which these actions must be taken is:

Engage a consultant, develop a programme of works for your site and inform the ARC of this with a copy of the works programme six weeks from the date of this letter;

Submit the results of the investigation of your site and your proposed action plan – three months from the date of this letter; and

Apply for the necessary consents – six months from the date of this letter.

Publications that may be of interest or use to you in respect of this request are listed in Appendix E to this letter.

Council staff will be in touch with you in the next two weeks to ascertain what progress your company has made in respect of this. Should you have any questions or require assistance or advice in regard to this matter please contact the undersigned at 366 2000 extension 8543.

Yours faithfully

Campbell Sturrock

Campbell Sturrock
Leader – Pollution Control
(Contamination Control)

cc RDC - Environmental Health Manager

Appendix A (Summary of Past Investigations)

1. The first investigation was carried out in 1991 and included a preliminary survey of copper, chromium and arsenic contamination of the known timber treatment plants in the region. The survey found that 13 of the 15 sites examined were contaminated with copper, chromium and arsenic chemicals (CCA) and would require further investigation. At that time it was envisaged that the Ministry for the Environment's (MfE's) requirement for all timber treatment plants to comply within three years with the environmental provisions promulgated in the Code of Practice for Safe Use of Timber Preservatives and Antisapstain Chemicals would greatly assist in preventing future contamination.
2. In 1996 a more detailed analysis of the issue of CCA contamination was undertaken. This investigation extended that carried out in 1991 by considering the environmental fate and transport of chemicals associated with CCA timber preservation at both treatment facilities and at timber storage sites. Some investigation was also undertaken into contamination by pentachlorophenol (PCP) at some sites. The major findings from this investigation included:
 - That there was a significant problem with contamination of land and surface water run-off by copper, chromium and arsenic at timber treatment sites. Contamination by other chemicals used in the timber treatment industry, such as PCP and boric acid, is also likely at some sites where these chemicals have been used;
 - The Code of Practice referred to above was generally not being complied with and, if it was, it did not prevent contamination by timber treatment chemicals;
 - Treated timber that is stored uncovered and exposed to the elements was causing both on and off-site contamination;
 - A serious contamination problem potentially exists at storage facilities for treated timber; and
 - Discharges of stormwater contaminated with timber treatment chemicals from both treatment and storage facilities have the potential to cause serious environmental effects.
3. A further series of investigations were carried out in late 2000/early 2001 with the specific aims being to:
 - Complete the work started in 1996 by auditing all the treatment facilities for general compliance with the Resource Management Act 1991 (RMA) with regard to actual and potential point sources of pollution, and for compliance with the Code of Practice (Code);
 - Ensure individual facilities come into compliance with the RMA and the Code and encourage those treating with CCA to look to more modern treatment techniques to ensure better fixation;
 - Identify off-site effects of timber treatment facilities on watercourses;
 - Initiate investigations by treatment facilities, where required, into the degree and extent of ground and/or groundwater contamination on these sites;
 - Assess possible remedial steps available to address both on and off-site contamination; and
 - Identify treatment sites requiring resource consents to discharge contaminants to land and/or water.

A copy of the ARC's Environmental Operations Plan was provided at that time to help the timber treatment companies prepare for the proposed visit.

This 2000/2001 series of visits confirmed the results of the previous investigations. Also, that there were significant impacts on adjacent watercourses at a number of sites.

Appendix B
(Site Summary)
Kowhai Timber (1990) Ltd site
ARC File #: 1-30-0139

Analytical results of sampling:

1990 analyses

Analyte								
Location	Timber drying area	Timber drying area	By drip pad	By treatment plant	Stream sediment by drying area	Downstream sediment	Non-volcanic soils, background	CCME Soil, Industrial
Media	Soil	Soil	Soil	Soil	Sediment	Sediment	Soil	Soil
Copper, mg/kg	159.2	523.7	629.8	5,452.7	42.7	26.4	1 – 45	91
Chromium, mg/kg	109.6	919.6	605.1	4,560.4	41.9	23.2	2 – 55	87
Arsenic, mg/kg	237.7	791.9	741.0	3,866.4	16.3	6.4	0.4 - 12	12

2000 analyses

Analyte				
Location	Storage yard	Beside treatment plant	Non-volcanic soils, background	CCME Soil, Industrial
Media	Soil	Soil	Soil	Soil
Copper, mg/kg	364	14,443	1 – 45	91
Chromium, mg/kg	751	18,054	2 – 55	87
Arsenic, mg/kg	441	3,852	0.4 - 12	12

Actual and potential issues:

Used CCA

Boric treatment

PCP use uncertain – about 45 years on site

1985 inspection identifies:

Potential risk to stream from drip area;

Wood shavings being blown about; and

Sawdust and slab timber on stream bank where it could be washed away in a flood.

Compliance with COP good except for the bunding issue – see below.

Sawdust near stream.

Treatment plant bund capacity only about 50% of that required by the COP.

Drip pad needs more bunding.

Kiln condensate discharges to ground.

UST removal report not available. Request from Mobil.

Did not sample for PCP although had a PCP spray tunnel.

Appendix C (Soil and Water Acceptance Criteria)

Please note that the ARC follows the Ministry for the Environment hierarchy of acceptance criteria. Also, the definition of background concentrations is that contained in the PARP: AL&W – concentrations of chemical constituents which occur in soil and groundwater at a specific locality (including aquifer) due to natural lithological and hydrogeochemical processes.

SOIL ACCEPTANCE CRITERIA

The ARC uses the Canadian environmental quality guidelines when assessing (environmental) contaminated site issues. Where human health issues are assessed the ARC uses the Ministry of Health/Ministry for the Environment June 1997 document titled "Health and Environmental Guidelines for Selected Timber Treatment Chemicals".

Canadian Council of Ministers of the Environment (1999), Canadian Environmental Quality Guidelines.

Canadian environmental quality guidelines are science-based goals for the quality of atmospheric, aquatic, and terrestrial ecosystems. Environmental quality guidelines are recommended as levels that should result in negligible risk to biota, their functions, or any interactions that are integral to sustaining the health of ecosystems and the designated resource uses they support. Selected guidelines are presented below.

- Water: aquatic life, freshwater;
- Sediment, freshwater, interim sediment quality guideline (ISQG);
- Sediment, freshwater, probable effect level (PEL); and
- Soil, industrial land use.

Contaminant	Aquatic life, freshwater (mg/l)	Sediment, freshwater (ISQG) (mg/kg)	Sediment, freshwater (PEL) (mg/kg)	Soil, industrial use (mg/kg)
Arsenic	0.005	5.9	17	12
Boron	0.005			
Chromium		37.3	90	87
Chromium (III)	0.0089			
Chromium (VI)	0.001			1.4
Copper	0.002 – 0.004	35.7	197	91
PCP	0.0005			7.6

It is also useful to compare concentrations detected at your site with the background concentrations in soil in the Auckland region. It should be noted that the Canadian guideline concentrations and the background concentrations are referred to in the ARC's Air, Land and Water Plan.

Auckland Regional Council (2002), Background Concentrations of Inorganic Elements in Soils from the Auckland Region, Technical Publication No. 153.

Element (Total recoverable)	Non-Volcanic Range (mg/kg)	Volcanic range (mg/kg)
Arsenic	0.4 - 12	0.4 - 12
Boron	2 - 45	<2 - 260
Chromium	2 - 55	3 - 125
Copper	1 - 45	20 - 90

Ministry of Health/Ministry for the Environment (1997), Health and Environmental Guidelines for Selected Timber Treatment Chemicals.

These guidelines are based on human health considerations and do not consider the environmental risks associated with these chemicals. They represent acceptable residual contaminant concentrations in soils for the following generalised uses of a site:

- Agricultural;
- Residential
- Industrial Use – unpaved
- Industrial use – paved; and
- Maintenance access (maintenance workers wearing normal work clothes carrying out subsurface maintenance works).

Only the industrial land use criteria are presented here in mg/kg on a dry weight basis. The guidelines document should be referred to for more detail and the background to these concentrations.

Contaminant	Unpaved Industrial	Maintenance Worker Protection	Paved Industrial - No Management Plan	Unpaved Industrial - Management Plan
Arsenic	500	650	650	2500 - NL
Boron	NA	NA	NA	NA
Chromium (III)	NA	NA	NA	NA
Chromium (VI)	360	510	510	1800 - NL
Copper	NA	NA	NA	NA
PCP	570	1000	1000	2800 - NL
Dioxins and furans	0.018	0.021	0.021	0.09 - NL

NA denotes an estimated health-based criterion >10,000 mg/kg.

WATER ACCEPTANCE CRITERIA

The ARC uses the ANZECC guidelines when assessing (environmental) contaminated water issues.

Australian and New Zealand Environment and Conservation Council (2000), Australian and New Zealand Guidelines for Fresh and Marine Water Quality.

Trigger values for toxicants are provided at alternative levels of protection in the guidelines. The 95% levels (level of protection for 95% of species), for slightly-moderately disturbed systems, are presented below for fresh water.

Contaminant	Trigger Value (mg/l)
Arsenic(III)	0.024
Arsenic(VI)	0.013
Boron	-
Chromium (III)	0.0002
Chromium(VI)	-
Copper	0.0014
PCP	0.01

Trigger values are concentrations that, if exceeded, would indicate a *potential* environmental problem, and so 'trigger' a management response, e.g. further investigation and subsequent refinement of the guidelines according to local conditions,

Appendix D
(List of Consultants in Alphabetic Order)

Timber Treatment Sites – Contaminated Site Consultants

The following list of consultants identified themselves as experienced in contaminated site investigations.

The Auckland Regional Council invited all Environmental Consultants listed in the 2002 Auckland Telecom yellow pages to provide a company profile relating to contaminated sites, this list is therefore not a recommendation or endorsement of a particular consultant by the ARC.

The Ministry for the Environment (www.mfe.govt.nz) have produced a document which outlines minimum requirements for reporting on contaminated sites.

Babbage Consultants 109 Fanshawe St PO Box 2027 Auckland Phone: 379 9980 Fax: 377 1170 Contact: Malcolm Stapleton	Beca Carter Hollings & Ferner Ltd. 132 Vincent Street PO Box 6345 Auckland Phone: 300-9000 Fax: 300-9300 Email: cblom@beca.co.nz Contact: Carron Blom
Earth Consultant Ltd. PO Box 25-084 St. Heliers Phone: 521-1822 Fax: 521-3181 Contact: Dr. Brian Maunder	Environmental & Earth Sciences Pty Ltd. PO Box 35-853 Browns Bay Phone: 476-4483 Fax: 476-4485 Email: eesnz@xtra.co.nz Contact: Johan Faurie
Environmental Business Group Ltd (EBG) PO Box 68-440 Newton Auckland Phone: 361-2229 Fax: 360-9500 Email: nigel@ebg.pl.net Contact: Nigel Mark-Brown	GHD Putney Way PO Box 76-477 Manukau City Phone: 261-1400 Fax: 262-8340 Email: ram.sharma@ghd.co.nz Contact: Ram Sharma
Gulf Resource Management Ltd PO Box 14049 Tauranga Phone: 07 544-2727 or 021 882 727 Email: rob@gulf-management.co.nz Contact: Rob Christie	Groundwater & Environmental Services PO Box 17-273 Greenlane Phone: 636-3363 or 027-487-4410 Contact: Andrew MacDonald

Hazel Hewitt & Associates Ltd. 6 Glenvar Close Torbay North Shore City Phone/Fax: 09-473-5495 Mobile: 025-941-570 Email: hazel-hewitt@internet.co.nz Contact: Robin N. Stevenson	Integrated Waste Solutions 21 East Street PO Box 72-067 Papakura Phone: 298-0279 Fax: 298-0309 Email: info@zerowaste-iws.co.nz Contact: Clive Couldwell
Kingett Mitchell Ltd PO Box 33849 Takapuna Phone: 486-8068 Fax: 486-8072 Email: rburden@kma.co.nz Contact: Rob Burden	Montgomery Watson Harza (MWH) 585 Great South Road Penrose PO Box 12941 Auckland Phone: 580-4500 Fax: 580-4514 Contact: Stuart Finlan
Dr P.E. Nelson 38 Tainui Road PO Box 32-355 Devonport Phone: 445-3181 Fax: 445-3047 Email: ljn.tainui@xtra.co.nz Contact: Peter Nelson	Pattle Delamore Partners 235 Broadway Newmarket PO Box 9528 Newmarket Phone: 523-6900 Fax: 523-6901 Contact: Keith Delamore
Sinclair Knight Merz Limited 25 Teed Street PO Box 9806 Newmarket Phone: 913-8900 Fax: 913-8901 Email: wstarke@skm.co.nz Contact: Walter Starke	Tonkin & Taylor Ltd. 19 Morgan Street Newmarket PO Box 5271 Auckland 1036 Phone: 355-6000 Fax: 307-0265 Email: auck@tonkin.co.nz Contact: Gerard Bird
URS 13-15 College Hill PO Box 821 Auckland Phone: 355 1380 Fax: 355 1333 Email: ian_jenkins@urscorp.com Contact: Ian Jenkins	

Appendix E
(Relevant Publications or Documentation)

Auckland Regional Council, *Environmental Operations Plan*. (A copy of this document has been sent to you in the past.)

Auckland Regional Council (2001), *Proposed Auckland Regional Plan: Air, Land and Water*.

Auckland Regional Council (2002), *Background Concentrations of Inorganic Elements in Soils from the Auckland Region*.

Canadian Council of Ministers (1999), *Canadian Environmental Quality Guidelines*.

Ministry of Health/Ministry for the Environment (1997), *Health and Environmental Guidelines for Selected Timber Treatment Chemicals*.

Occupational Safety and Health Service, Department of Labour (1993), *Approved Code of Practice for the Safe Use of Timber Preservatives and Antisapstain Chemicals*.

Occupational Safety and Health, Department of Labour (1994), *Health and Safety Guidelines on Clean-up of Contaminated Sites*.